

APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. §41.37  
U.S. Application Serial No. 10/043,098  
Attorney Docket No. 042846-0313073

AF/ZZW



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE PATENT            Andrew SCHIRMER, *et al.*  
APPLICATION OF:  
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FOR:                    SEARCH REFINEMENT GRAPHICAL USER INTERFACE

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**APPEAL BRIEF UNDER 37 C.F.R. §41.37**

**Mail Stop Appeal Brief - Patents**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA. 22313-1450

Dear Sir:

Further to the Notice of Appeal filed on **April 22, 2005**, Appellants respectfully submit an Appeal Brief pursuant to 37 C.F.R. §41.37.

The Director is authorized to charge the \$500.00 fee for filing an Appeal Brief pursuant to 37 C.F.R. §41.20(b)(2). The Director is further authorized to charge any additional fees that may be due, or credit any overpayment of same to Deposit Account No. 033975 (**Ref. No. 042846-0313073**).

**REQUIREMENTS OF 37 C.F.R. §41.37**

**I. REAL PARTY IN INTEREST**

The real party in interest is International Business Machines Corporation.

**II. RELATED APPEALS AND INTERFERENCES**

Appellants are aware of no related appeals or interferences.

**III. STATUS OF CLAIMS**

Pending: Claims 1-5, 7-10, 13-16, and 19-22 are pending.

Cancelled: Claims 6, 11, 12, 17, 18, 23, and 24 are cancelled.

Rejected: Claims 1-5, 7-10, 13-16, and 19-22 stand rejected.

Allowed: No claims have been allowed.

On Appeal: The rejection of claims 1-5, 7-10, 13-16, and 19-22 under  
35 U.S.C. § 103(a) is appealed.

**IV. SUMMARY OF CLAIMED SUBJECT MATTER**

One aspect of the invention may relate to a system and method for enabling a user to refine a search query using a graphical user interface. See the Specification at page 2, lines 16-21. In one embodiment of the invention, a search of a database is performed according to a search query to produce an initial search result. Based on the relevance of the initial search, the search query may be refined, and a refined search may be performed

that includes searching only those objects included in the initial search result. *See* the Specification at page 5, lines 21 and 22. Searching only objects included in the initial search result may enable the refined search to be performed without re-searching the entire database. *See* the Specification at page 5, lines 22 and 23.

In one embodiment, a graphical user interface may be presented to a user. *See* the Specification at FIG. 1, element 102; and page 4, lines 12 and 13. The graphical user interface may be presented to the user via a presenting module (*e.g.*, GUI presenting module 202 of FIG. 2). *See* the Specification at page 6, lines 19 and 20. The recitation of “presenting means” may refer to *at least* the GUI presenting module 202 of FIG. 2.

In one embodiment, a user may be enabled to selectively input search parameters into a first search query using the graphical interface. *See* the Specification at page 4, lines 13 and 14; and FIG. 1, element 104. The user may be enabled to selectively input search parameters into the first search query via a search parameter inputting module (*e.g.*, search parameter input enabling module 204 of FIG. 2). *See* the Specification at page 6, lines 20-22. The recitation of “search parameter input means” may include *at least* search parameter input enabling module 204.

In one embodiment, the first search query may be received, at least one database may be searched for objects that satisfy the first search query, and a determination may be made as to whether at least one object in the at least one database satisfies the search query. *See* the Specification at page 4, lines 14-19; and FIG. 1, elements 106, 108, and 110. The search query may be received by a receiving module (*e.g.*, search query receiving module 206 of FIG. 2). The at least one database may be searched by a searching module, and the determination as to whether at least one object in the at least

one database satisfies the search query may be made by a first search query determining module (*e.g.*, database searching module 208 of FIG. 2). *See* the Specification at page 6, line 23 – page 7, line 2. The recitation of “receiving means” may include *at least* search query receiving module 206. The recitation of “searching means” and “first search query determining means” may include *at least* database searching module 208.

In one embodiment of the invention, a first search result may be retrieved, the first search result comprising the at least one object if a determination is made that the at least one object satisfies the first search query. *See* the Specification at page 4, lines 21 and 22; and FIG. 1, element 114. The at least one object may be retrieved by a retrieving module (*e.g.*, search result retrieving module 214 of FIG. 2). *See* the Specification at page 7, lines 6 and 7. The recitation of “retrieving means” may include *at least* search result retrieving module 214.

In one embodiment, a type of information included in the at least one object associated with the first search result may be determined. *See* the Specification at page 2, line 22 – page 3, line 1; and FIG. 1, element 116. The type of information may be determined by an information type determining module (*e.g.*, information type determining module 216 of FIG. 2). *See* the Specification at page 7, lines 7-9. The recitation of “information type determining means” may include *at least* information type determining module 216.

In one embodiment of the invention, at least one search refinement option may be determined based on the type of information determined. *See* the Specification at page 5, lines 3-5. The search refinement option may be determined by a search refinement option determining module (*e.g.*, search refinement determining module 218 of FIG. 2). *See* the

Specification at page 7, lines 9-11. The recitation of “search refinement option determining means” may include *at least* search refinement determining module 218.

In one embodiment, the first search result may be searched for objects that satisfy a second search query that comprises the at least one search refinement option. *See* the Specification at page 5, lines 20-23, and FIG. 1, element 124. The second search query may be input at a second search query inputting module (*e.g.*, search refinement option receiving module 222 of FIG. 2). *See* the Specification at page 8, lines 3-11. The recitation of “second search query inputting means” may include *at least* search refinement option receiving module 222 of FIG. 2.

**V. GROUND OF REJECTION TO BE REVIEWED ON APPEAL (35 U.S.C. § 103).**

Claims 1-5, 7-10, 13-16, and 19-22 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,169,986 to Bowman *et al.* (hereinafter “Bowman”) in view of U.S. Patent No. 6,012,053 to Pant *et al.* (hereinafter “Pant”), and further in view of U.S. Patent No. 6,748,376 to Beall *et al.* (hereinafter “Beall”). *See* 1/25/2005 Final Office Action, pg. 3, ¶6.

**VI. ARGUMENT**

**A. CLAIMS 1-5, 7-10, 13-16, AND 19-22**

Claims 1-5, 7-10, 13-16, and 19-22 are patentable for *at least* the reason that the Examiner has failed to set forth a *prima facie* case of obviousness under 35 U.S.C. 103(a). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must

be taught or suggested by the prior art. *CFMT Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 68 USPQ2d 1940 (Fed. Cir. 2003).

Independent claims 1, 7, 13, and 19 recite, among other things, searching the first search result for objects that satisfy a second search query. In an exemplary embodiment, a first search may retrieve a first search result that includes one or more documents, these documents may satisfy a first search query (see the Specification at page 3, lines 1-3). The system may identify a search refinement option that may enable a user to further limit the documents included in the first search result (see the Specification at page 3, lines 6 and 7). Upon selection by the user, a search refinement option may be applied only to documents included in the first search result (see the specification at page 3, lines 10-12).

The rejection made by the Examiner is improper *at least* because the Examiner has not addressed this element of the claimed invention. Further, the rejection is improper *at least* because the cited references do not, in fact, teach or suggest this feature of the claimed invention.

1. The Examiner has not addressed the claimed feature of searching the first search result for objects that satisfy a second search query.

The rejection of independent claims 1, 7, 13, and 19 is improper because the Examiner has failed to address the feature of searching a first search result for objects that satisfy a second search query, and therefore, has failed to establish a *prima facie* case of obviousness. In the Request for Reconsideration filed March 24, 2005 (hereinafter "Request for Reconsideration"), Appellants argued that the Examiner had not addressed the feature of searching a first search result for objects that satisfy a second search query. *See* Request for Reconsideration at page 9, lines 10-12). In the subsequent Advisory Action

mailed April 8, 2005 (hereinafter "Advisory Action"), the Examiner did not remedy this deficiency in the rejection.

More particularly, the Examiner merely reiterated previously made arguments with respect to Bowman, Pant, and Beall, but again failed to address this feature. For example, regarding Bowman the Examiner asserted that the reference teaches:

refining search queries using a [sic] user interface that requires [sic] the user to add or delete a set of related terms to a [sic] submitted search query for refining the query and displaying the search result: a method or system of facilitating the refinement of search queries, receiving a search query from a user submitting via a [sic] GUI as shown in fig. 2, identifying the refined search queries, displaying [sic] the search result as shown in fig. 3, from a GUI [sic] search screen, the [sic] user is enabled [sic] to select or pick some search parameters such as titles, author, publisher, or ISBN. Advisory Action at page 2, lines 3-7 (citations omitted).

The Examiner further asserted that Pant teaches:

presenting the search result and there are several parameters of the user input interface to vary the relevance factors from which the user may manipulate them, the search result from searching or retrieving is provided to the user, and the [sic] type of information is based on the selected object. Advisory Action at page 2, lines 8-11 (citations omitted).

Finally, the Examiner asserted that Beall teaches:

search refinement through classification or parametric selections. The classification list is presented to the user along with the list of matches [sic] as an aid to the user for further refining the search and displaying and refinement of search query results: after the first search, the logic box of 124 in fig. 2(b) checks [sic] the number of hits and then [sic] refines the search query with a list of categories to be displayed for the user to select. After [sic] that, the second search will begin. Advisory Action at page 2, lines 12-16 (citation omitted).

As can be seen from the portions provided above, the Examiner has still not addressed the claimed feature of searching a first search result for objects that satisfy a second search query. Therefore, a *prima facie* case of obviousness has not been made by

the Examiner, and the rejection of claims 1, 7, 13, and 19 is improper and must be withdrawn.

2. Bowman, Pant, and Beall, alone or in combination, do not teach searching a first search result for objects that satisfy a second search query.

Additionally the rejection of independent claims 1, 7, 13, and 19 is improper *at least* because Bowman, Pant, and Beall, alone or in combination do not teach or suggest all of the features of the claimed invention. For example, the cited references fail to teach or suggest searching a first search result for objects that satisfy a second search query.

- a. *None of the cited references, by themselves, teaches or suggests the above-mentioned feature.*

Neither Bowman, Pant, nor Beall, by themselves, teaches searching the first search result for objects that satisfy a second search query. More particularly, Bowman discloses a search engine that provides a user with suggested related terms in order to refine a search performed based on a first search query. *See* Bowman at the Abstract. In the search engine described in Bowman, refining a search includes performing an entirely new search of the entire database that was searched according to the first search query, wherein the new search is conducted using a new search query that includes the first search query and a suggested related search term. *See* Bowman at col. 14 lines 31-35. Bowman does not, however, teach or suggest searching a first search result for objects that satisfy a second search query.

The Examiner admits that Bowman is deficient for failing to disclose retrieving a search result comprising at least one object if a determination is made that the at least one object satisfies the search query, and determining a type of information included in the at least one object. *See* the 1/25/2005 Final Office Action at page 4, lines 5-9. The



Examiner alleges that Pant teaches these features. Pant appears to disclose a system for ranking results from a search query based on user specified relevance factors. *See* Pant at the Abstract. Even if the Examiner's assertion is accepted, Pant does not disclose any features directed to refining a first search result, and therefore, does not teach or suggest searching a first search result for objects that satisfy a second search query.

The Examiner further acknowledges that the combination of Bowman and Pant does not teach or suggest "the type of information of the first search [sic] and the second search query comprising the at least one refinement option," *see* the 1/25/2005 Final Office Action at page 4, lines 13-15, but alleges that Beall teaches these features. Beall apparently describes a system for database manipulation that enables users to refine a search. In the system disclosed in Beall, a search of a database, performed based on a search query from a user, may produce a search result that includes a plurality of items that match the search query. *See* Beall at col. 6, lines 29-34. The search may be refined by selecting a category that corresponds to some of the items included in the search result. *See* Beall at col. 6, lines 50-55. The selection of a category by the user becomes equivalent to submitting a predefined query to the database, which will return only items that match the search query and correspond to the selected category. *See* Beall at col. 7, lines 35 and 36. In other words, similar to the search refinement taught in Bowman, the selection of a category in the system of Beall results in the submission of a second search query to the database for a new search of the entire database according to the second search query. However, Bowman does not disclose performing a second search wherein only the items included in the first search result are searched.

Therefore, Bowman, Pant, and Beall, by themselves, do not teach or suggest searching a first search result for objects that satisfy a second search query. Accordingly, the cited references, by themselves do not teach or suggest all of the features of the claimed invention.

- b. *The cited references, in combination with one another, do not teach or suggest the above-identified limitation of the claimed invention.*

Appelants are aware that nonobviousness may not be established by attacking the references individually where the rejection is based upon the combined teachings of the references. *In re Andros*, 988 F.2d 131, 28 U.S.P.Q.2d 1146 (Fed. Cir. 1993). However, in the instant application, the Examiner has not formulated a rejection that expressly addresses the claimed feature of searching the first search result for objects that satisfy a second search query. Further, none of cited references, alone or in combination teach or suggest this feature of the claimed invention. Appelants argue that not only do the references by themselves fail to teach or suggest searching the first search result for objects that satisfy a second search query, but that even in combination the references fail to teach or suggest this element of the claimed invention. Accordingly, the rejection of claims 1, 7, 13, and 19 based on Bowman, Pant, and Beall is improper and must be withdrawn.

### 3. Conclusion

Claims 1-5, 7-10, 13-16, and 19-22 are patentable for *at least* the reason that the Examiner has failed to set forth a *prima facie* case of obviousness under 35 U.S.C. 103(a). More particularly, the rejection made by the Examiner is improper *at least* because (1) the Examiner has not addressed the claim feature of searching the first search result for objects

that satisfy a second search query, as is recited in each of independent claims 1, 7, 13, and 19; and/or (2) the references, alone or in combination, do not teach or suggest this feature of independent claims 1, 7, 13, and 19. Accordingly, the rejection of independent claims 1, 7, 13, and 19 is improper and must be withdrawn. Further, claims 2-5, 8-10, 14-16, and 20-22 depend from corresponding ones of independent claims 1, 7, 13, and 19, and therefore, are patentable based on their dependency, as well as for the features that they add to the independent claims.

**VII. APPENDIX**

- A. EVIDENCE (NONE)
- B. RELATED PROCEEDINGS (NONE)
- C. PENDING CLAIMS

The pending claims (claims 1-5, 7-10, 13-16, and 19-22) may be found in the Appendix included herewith.


**CONCLUSION**

For at least the foregoing reasons, Appellant respectfully requests that the rejection of each of pending claims 1-4, 6-11, 13-19, 21-24, and 26-33 under 35 U.S.C. §103(a) be reversed.

Date: **June 22, 2005**

Respectfully submitted,

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**APPENDIX C.**

1. **(Previously Presented)** A method for enabling a user to refine a search query using a graphical user interface, the method comprising the steps of:

presenting a graphical user interface to a user;

enabling a user to selectively input search parameters into a first search query using the graphical user interface, wherein the step of presenting further comprises the steps of:

receiving the first search query;

searching at least one database for objects that satisfy the first search query;

determining whether at least one object stored in the database satisfies the first search query;

retrieving a first search result comprising the at least one object if a determination is made that the at least one object satisfies the first search query;

determining a type of information included in the at least one object associated with the first search result;

determining at least one search refinement option based on the type of information determined; and

searching the first search result for objects that satisfy a second search query, the second search query comprising the at least one search refinement option.

2. **(Original)** The method of claim 1, further comprising the step of:

presenting the at least one search refinement option to the user.

3. **(Original)** The method of claim 2, wherein the at least one search refinement option is presented in a drop-down menu.

4.     **(Original)** The method of claim 2, further comprising the step of:  
  
          enabling the user to select the at least one search refinement option.
  
5.     **(Previously Presented)** The method of claim 4, further comprising the step of:  
  
          enabling the user to input the second search query comprising the at least one search  
refinement option.
  
6.     **(Cancelled)**
  
7.     **(Previously Presented)** A system for enabling a user to refine a search query using a  
graphical user interface, the system comprising:  
  
          presenting means for presenting a graphical user interface to a user;  
  
          search parameter inputting means for enabling a user to selectively input search  
parameters into a first search query using the graphical user interface;  
  
          receiving means for receiving the first search query;  
  
          searching means for searching at least one database for objects that satisfy the first  
search query;  
  
          first search query determining means for determining whether at least one object  
stored in the database satisfies the first search query;  
  
          retrieving means for retrieving a first search result comprising the at least one object if  
a determination is made that the at least one object satisfies the first search query;  
  
          information type determining means for determining a type of information included in  
the at least one object associated with the first search result;

search refinement option determining means for determining at least one search refinement option based on the type of information determined; and

second search query inputting means for enabling the user to input a second search query comprising the at least one search refinement option, that searches the first search result for objects that satisfy the second search query.

8. **(Original)** The system of claim 7, further comprising search refinement option presenting means for presenting the at least one search refinement option to the user.

9. **(Original)** The system of claim 8, wherein the at least one search refinement option is presented in a drop-down menu.

10. **(Original)** The system of claim 8, further comprising search refinement option selecting means for enabling the user to select the at least one search refinement option.

11. **(Cancelled)**

12. **(Cancelled)**

13. **(Previously Presented)** A system for enabling a user to refine a search query using a graphical user interface, the system comprising:

a presenting module that presents a graphical user interface to a user;

a search parameter inputting module that enables a user to selectively input search parameters into a first search query using the graphical user interface;

a receiving module that receives the first search query;

a searching module that searches at least one database for objects that satisfy the first search query;

a first search query determining module that determines whether at least one object stored in the database satisfies the first search query;

a retrieving module that retrieves a first search result comprising the at least one object if a determination is made that the at least one object satisfies the first search query;

an information type determining module that determines a type of information included in the at least one object associated with the first search result;

a search refinement option determining module that determines at least one search refinement option based on the type of information determined; and

a second search query inputting module that enables the user to input a second search query comprising the at least one search refinement option, that searches the first search result for objects that satisfy the second search query.

14. **(Original)** The system of claim 13, further comprising a search refinement option presenting module that presents the at least one search refinement option to the user.

15. **(Original)** The system of claim 14, wherein the at least one search refinement option is presented in a drop-down menu.

16. **(Original)** The system of claim 14, further comprising a search refinement option selecting module that enables the user to select the at least one search refinement option.



17. **(Cancelled)**

18. **(Cancelled)**

19. **(Previously Presented)** A processor readable medium comprising processor readable code embodied therein for causing a processor to enable a user to refine a first search query using a graphical user interface, the medium comprising:

presenting code that causes a processor to present a graphical user interface to a user;

search parameter inputting code that causes a processor to enable a user to selectively input search parameters into a first search query using the graphical user interface;

receiving code that causes a processor to receive the first search query;

searching code that causes a processor to search at least one database for objects that satisfy the first search query;

first search query determining code that causes a processor to determine whether at least one object stored in the database satisfies the first search query;

retrieving code that causes a processor to retrieve a first search result comprising the at least one object if a determination is made that the at least one object satisfies the first search query;

information type determining code that causes a processor to determine a type of information included in the at least one object associated with the first search result;

search refinement option determining code that causes a processor to determine at least one search refinement option based on the type of information determined; and

second search query inputting code that causes a processor to enable the user to input a second search query comprising the search refinement option, that searches the first search result for objects that satisfy the second search query.

20. **(Original)** The medium of claim 19, further comprising a search refinement option presenting code that causes a processor to present the at least one search refinement option to the user.

21. **(Original)** The medium of claim 20, wherein the at least one search refinement option is presented in a drop-down menu.

22. **(Original)** The medium of claim 20, further comprising search refinement option selecting code that causes a processor to enable the user to select the at least one search refinement option.

23. **(Cancelled)**

24. **(Cancelled)**